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10/797,645	03/10/2004	Ryan Irrer	TRW(RG)5568	4203
7590 10/11/2005			EXAMINER	
TAROLLI, SUNDHEIM, COVELL, & TUMMINO L.L.P.			GARCIA, ERNESTO	
1111 LEADER BLDG. 526 SUPERIOR AVENUE CLEVELAND, OH 44114-1400			ART UNIT	PAPER NUMBER
			3679	

DATE MAILED: 10/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

46/					
7,00	Application No.	Applicant(s)			
	10/797,645	IRRER, RYAN			
Office Action Summary	Examiner	Art Unit			
	Ernesto Garcia	3679			
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the c	orrespondence address			
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). Status	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tin vill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).			
1) Responsive to communication(s) filed on 10 M	arch 2004				
2a) This action is FINAL . 2b) This action is non-final.					
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.					
Disposition of Claims					
4) ☐ Claim(s) 1-20 is/are pending in the application. 4a) Of the above claim(s) is/are withdray 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1-20 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/o	vn from consideration.				
Application Papers					
9) ☐ The specification is objected to by the Examine 10) ☐ The drawing(s) filed on 10 March 2004 is/are: Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct 11) ☐ The oath or declaration is objected to by the Example 11.	a) accepted or b) dobjected t drawing(s) be held in abeyance. Sed ion is required if the drawing(s) is ob	e 37 CFR 1.85(a). jected to. See 37 CFR 1.121(d).			
Priority under 35 U.S.C. § 119		•			
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority documents 2. Certified copies of the priority documents 3. Copies of the certified copies of the priority documents application from the International Bureau * See the attached detailed Office action for a list	s have been received. s have been received in Applicati rity documents have been receive u (PCT Rule 17.2(a)).	ion No: ed in this National Stage			
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	4) Interview Summary Paper No(s)/Mail D 5) Notice of Informal F				
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date	6) Other:	aton Application (FTO-192)			

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "36" has been used to designate both a threaded portion and an intermediate portion of the first sleeve 30 (Fig. 3).

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "66" has been used to designate both a threaded portion and an intermediate portion of the second sleeve 60 (Fig. 3).

The drawings are objected to because Figure 5 is missing the longitudinally extending seam 44. See MPEP 608.02(e).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended". If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and

appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The disclosure is objected to because of the following informalities: the description of reference characters "36" and "66" is inconsistent through the specification and the abstract. Appropriate correction is required.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction

of the following is required: "an adjustable tie rod" recited in claim 11, line 1, "first tie rod member" recited in claim 11, line 3, "second tie rod member" recited in claim 11, line 6, and "socket attachment means" in claim 11, line 5. Applicant is urged to review claims 11-20 in their entirety as the language used in these claims do not have proper antecedent basis in the specification. Also the surfaces described in claims 7 and 8 are not found in the disclosure, i.e., the first, second, third, fourth surfaces.

Claim Objections

Claims 7 and 11 are objected to because of the following informalities:

regarding claim 7, "an outer surface" in lines 2-3 should be --a first outer surfaceto provide proper antecedent basis to claim 8, and "an outer surface" in line 9 should

regarding claim 11, --a-- needs to be inserted before "left-hand" in line 4, "threads" in line 4 and 7 should be --thread--, and --a-- needs to be inserted before "right-hand". Appropriate correction is required. For purposes of examining the instant invention, the examiner has assumed these corrections have been made.

be --a first outer surface-- to provide proper antecedent basis to claim 8; and,

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 11, the limitation "socket attachment means" in line 5 makes unclear what structure is associated with the socket attachment means. The disclosure fails to indicate what is the socket attachment means. Additionally, it is noted that no corresponding function to be performed has been associated with this means.

Regarding claims 12-20, the claims depend from claim 11 and therefore are indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Broszat et al., 4,902,158 (see marked-up attachment).

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Regarding claim 1, Broszat et al. disclose, in Figure 5, a turnbuckle assembly comprising a one-piece first sleeve 16, a one-piece second sleeve 16, and a connector member 12. The first sleeve 16 has a first axial end A8 and a second axial end A9. The first axial end A8 has an internally threaded portion 2 threadably engaging a first threaded part 3. The first axial end A8 includes an integrally formed clamp 17 clamping the first axial end A8 to the first threaded part 3. The second sleeve 16 has a first axial end A8 and a second axial end A9. The first axial end A8 of the second sleeve 16 has an internally threaded portion 2 threadably engaging a second threaded part 3. The first axial end A8 of the second sleeve 16 includes an integrally formed clamp 17 clamping the first axial end A8 to the second threaded part 3. The connector member 12 interconnects the first sleeve 16 and the second sleeve 16. The connector member 12 has a first axial end A14 non-rotatably connected to the second axial end A9 of the first sleeve 16. The connector member 12 has a second axial end A15 non-rotatably connected to the second axial end A9 of the second sleeve 16.

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Regarding claim 2, the first axial end **A8** of the first sleeve **16** includes a first clamping portion **6** and a second clamping portion **6** movable toward each other. The first axial end **A8** of the second sleeve **16** includes a first clamping portion **6** and a second clamping portion **6** movable toward each other. See Figure 3.

Regarding claim 3, the first clamping portion 6 and the second clamping portion 6 of the first sleeve 16 and the second sleeve 16, each include a radially extending portion having openings through which bolts 8 extend (Fig. 1).

Regarding claim 4, the first clamping portion 6 of the first sleeve 16 includes a portion A27 extending toward the second clamping portion 6 of the first sleeve 16. The first clamping portion 6 of the second sleeve 16 includes a portion A27 extending toward the second clamping portion 6 of the second sleeve 16.

Regarding claim 5, the portion A27 of the first clamping portion 6 of the first sleeve 16 has a surface A28 (see marked-up attachment, Fig. 11) extending parallel to the axis of the first sleeve 16. The portion A27 of the first clamping portion 6 of the second sleeve 16 has a surface A28 extending parallel to the axis of the second sleeve 16.

Regarding claim 6, the first sleeve 16 has a longitudinally extending seam A29. The first clamping portion 6 and the second clamping portion 6 of the first sleeve 16 extend in opposite sides of the seam A29 in the first sleeve 16. The second sleeve 16 has a longitudinally extending seam A29. The first clamping portion 6 and the second clamping portion 6 of the second sleeve 16 extend on opposite sides of the seam A29 in the second sleeve 16.

Regarding claim 9, the first axial end A8 of the first sleeve 16 has a first outer diameter A31. The second axial end A9 of the first sleeve 16 has a second outer diameter A32 smaller than the first outer diameter A31. The first axial end A8 of the second sleeve 16 has a first outer diameter A31. The second axial end A9 of the second sleeve 16 has a second outer diameter A32 smaller than the first outer diameter A31 of the second sleeve 16.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11-16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broszat et al., 4,902,158 (see marked-up attachment), in view of Braisted, Jr., 4,614,451.

Regarding claim 11, Broszat et al. disclose, in Figures 8-11, an adjustable tie rod comprising a first tie rod member 3, a second tie rod member 3, a first sleeve 16, a second sleeve 16, and a connector member 12. The first tie rod member 3 includes a first end portion A8 and a second end portion A15. The first end portion A8 has a left-

hand, external thread 2 (col. 2, lines 53-56). The second tie rod member 3 includes a first end portion A8 and a second end portion A15. The first end portion A8 has a right-hand, external thread 2 (col. 2, lines 53-56). The first sleeve 16 has a first axial end A8 and a second axial end A9. The first axial end A8 of the first sleeve 16 has an internally threaded portion 2 threadably engaging the first end portion A8 of the first tie rod member 3. The first axial end A8 of the first sleeve 16 includes an integrally formed clamp 17 clamping the first axial end A8 to the first end portion A8 of the first tie rod member 3. The first axial end A8 of the second sleeve 16 includes an integrally formed clamp 17 clamping the first axial end A8 to the first end portion A8 of the second tie rod member 3. The connector member 12 interconnects the first sleeve 16 and the second sleeve 16. The connector member 12 has a first axial end A14 non-rotatably connected to the first axial end A8 of the first sleeve 16. The connector member 12 has a second axial end A15 non-rotatably connected to the second axial end A9 of the second sleeve 16.

However, Broszat et al. fail to disclose the second end portion **A15** of the first tie rod member **3** having a socket attachment means and the second end portion **A15** of the second tie rod member **3** having a socket attachment means. Braisted, Jr., 4,614,451, teaches, in Figure 1, a second end portion of a first tie rod member **10** having a socket attachment means **14** and a second end portion of a second tie rod member **11** having a socket attachment means **14** to secure in a conventional manner to another element of a vehicle steering linkage system (col. 3, lines 28-33). Therefore,

as taught by Braisted, Jr., it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a socket attachment means at the second end portion of the first tie rod member and the second tie rod member of Broszat et al. to secure in a conventional manner the turnbuckle assembly to another element of a vehicle steering linkage system because it is well-within the level of skill of one of ordinary skill in the art to utilize known features of the art for the purpose for which they are known.

Regarding claim 12, the first axial end **A8** of the first sleeve **16** includes a first clamping portion **6** and a second clamping portion **6** movable toward each other. The first axial end **A8** of the second sleeve **16** includes a first clamping portion **6** and a second clamping portion **6** movable toward each other. See Figure 3.

Regarding claim 13, the first clamping portion **6** and the second clamping portion **6** of the first sleeve **16** and the second sleeve **16**, each include a radially extending portion having openings through which bolts 8 extend (Fig. 1).

Regarding claim 14, the first clamping portion 6 of the first sleeve 16 includes a portion A27 extending toward the second clamping portion 6 of the first sleeve 16. The first clamping portion 6 of the second sleeve 16 includes a portion A27 extending toward the second clamping portion 6 of the second sleeve 16.

Regarding claims 15, the portion A27 of the first clamping portion 6 of the first sleeve 16 has a surface A28 (see marked-up attachment, Fig. 11) extending parallel to the axis of the first sleeve 16. The portion A27 of the first clamping portion 6 of the second sleeve 16 has a surface A28 extending parallel to the axis of the second sleeve 16.

Regarding claim 16, the first sleeve 16 has a longitudinally extending seam A29. The first clamping portion 6 and the second clamping portion 6 of the first sleeve 16 extend in opposite sides of the seam A29 in the first sleeve 16. The second sleeve 16 has a longitudinally extending seam A29. The first clamping portion 6 and the second clamping portion 6 of the second sleeve 16 extend on opposite sides of the seam A29 in the second sleeve 16.

Regarding claim 19, the first axial end A8 of the first sleeve 16 has a first outer diameter A31. The second axial end A9 of the first sleeve 16 has a second outer diameter A32 smaller than the first outer diameter A31. The first axial end A8 of the second sleeve 16 has a first outer diameter A31. The second axial end A9 of the second sleeve 16 has a second outer diameter A32 smaller than the first outer diameter A31 of the second sleeve 16.

Claims 7, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broszat et al., 4,902,158, as applied to claims 1-6 and 9, and further in view of Benoit et al., 3,837,755 (see marked-up attachment).

Regarding claim 7, Broszat et al. disclose the second axial end A9 of the first sleeve 16 having an outer surface A30 extending parallel to the axis of the first sleeve 16 and the connector member 12 having a first inner surface A33. The second axial end A9 of the second sleeve 16 having an outer surface A30 extending parallel to the axis of the second sleeve 16. However, Broszat et al. fail to disclose the first inner surface A33 engageable with the outer surface A30 of the second axial end A9 of the first sleeve 16; and, the connector member 12 having a second inner surface engageable with the outer surface A30 of the second axial end A9 of the second sleeve 16.

Benoit et al. teach, in Fig. 2, a first inner surface **A33** of a connecting member **16** engageable with an outer surface **34** of a second axial end of a first sleeve **12**; and, the connector member **16** having a second inner surface **A33** engageable with the outer surface **34** of the second axial end of the second sleeve **14** in order to make a tie rod a multi-piece tie rod with the use of a connector pressed against two sleeves (see Abstract). Therefore, as taught by Benoit et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the first inner surface **A33** of the connector member **12** of Broszat et al. engageable with the outer surface

A30 of the second axial end A9 of the first sleeve 16; and, to make the connector member 12 having a second inner surface engageable with the outer surface A30 of the second axial end A9 of the second sleeve 16 in order to make a tie rod a multi-piece tie rod with the use of pressing the connector member against two sleeve.

Regarding claim 8, Broszat et al., as modified above, fail to disclose the second axial end A9 of the first sleeve 16 having a second outer surface extending parallel to the axis and the first outer surface A30 of the first sleeve 16; the connector member 12 having a third inner surface engageable with the second outer surface of the second end of the first sleeve 16; the second axial end A9 of the second sleeve 16 having a second outer surface extending parallel to the first outer surface A30 and the axis of the second sleeve 16; and, the connector member 12 having a fourth inner surface engageable with the second surface of the second end of the second sleeve 16.

Benoit et al. teach in Figure 2, a second axial end of the first sleeve 12 having a second outer surface 26 extending parallel to the axis and the first outer surface A33 of the first sleeve 12; a connector member 16 having a third inner surface A34 engageable with the second outer surface 26 of the second end of the first sleeve 12; a second axial end of a second sleeve 14 having a second outer surface 26 extending parallel to the first outer surface A33 and the axis of the second sleeve 14; and, the connector member 16 having a fourth inner surface A34 engageable with the second outer surface 26 of the second end of the second sleeve 14 to effect attachment of the first sleeve

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and the second sleeve (col. 1, lines 47-50). Therefore, as taught by Benoit et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the second axial end A9 of the first sleeve 16 with a second outer surface extending parallel to the axis and the first outer surface A30 of the first sleeve 16; to provide the connector member 12 with a third inner surface engageable with the second outer surface of the second end of the first sleeve 16; to provide the second axial end A9 of the second sleeve 16 with a second outer surface extending parallel to the first outer surface A30 and the axis of the second sleeve 16; and, to provide the connector member 12 with a fourth inner surface engageable with the second surface of the second end of the second sleeve 16 to effect attachment of the first sleeve and the sleeve to the connector member.

Regarding claim 10, Broszat et al. fail to disclose the connector member 12 crimped to the second axial end A9 of the first sleeve 16, and crimped to the second axial end A9 of the second sleeve 16. Benoit et al. teach, in Figures 1 and 2, a connecting member 16 crimped to a second end of a first sleeve 12 and to a second end of a second sleeve 14 to make a multi-piece tie rod (see Abstract). Therefore, as taught by Benoit et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the welding sleeve of Broszat et al. with a pressing sleeve so that the connecting member 16 is crimped to a second end of the first sleeve and to the second end of the second sleeve to make a multi-piece tie rod.

Claims 17, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broszat et al., 4,902,158, in view of Braisted, Jr., 4,614,451, as applied to claims 11-16 and 19, and further in view of Benoit et al., 3,837,755.

Regarding claim 17, Broszat et al., as modified, disclose the second axial end A9 of the first sleeve 16 having an outer surface A30 extending parallel to the axis of the first sleeve 16 and the connector member 12 having a first inner surface A33. The second axial end A9 of the second sleeve 16 having an outer surface A30 extending parallel to the axis of the second sleeve 16. However, Broszat et al. fail to disclose the first inner surface A33 engageable with the outer surface A30 of the second axial end A9 of the first sleeve 16; and, the connector member 12 having a second inner surface engageable with the outer surface A30 of the second sleeve 16.

Benoit et al. teach, in Fig. 2, a first inner surface A33 of a connecting member 16 engageable with an outer surface 34 of a second axial end of a first sleeve 12; and, the connector member 16 having a second inner surface A33 engageable with the outer surface 34 of the second axial end of the second sleeve 14 in order to make a tie rod a multi-piece tie rod with the use of a connector pressed against two sleeves (see Abstract). Therefore, as taught by Benoit et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the first inner surface A33 of the connector member 12 of Broszat et al. engageable with the outer surface

A30 of the second axial end A9 of the first sleeve 16; and, to make the connector

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second axial end A9 of the second sleeve 16 in order to make a tie rod a multi-piece tie

member 12 having a second inner surface engageable with the outer surface A30 of the

rod with the use of pressing the connector member against two sleeve.

Regarding claim 18, Broszat et al., as modified above, fail to disclose the second axial end A9 of the first sleeve 16 having a second outer surface extending parallel to the axis and the first outer surface A30 of the first sleeve 16; the connector member 12 having a third inner surface engageable with the second outer surface of the second end of the first sleeve 16; the second axial end A9 of the second sleeve 16 having a second outer surface extending parallel to the first outer surface A30 and the axis of the second sleeve 16; and, the connector member 12 having a fourth inner surface engageable with the second surface of the second end of the second sleeve 16.

Benoit et al. teach in Figure 2, a second axial end of the first sleeve 12 having a second outer surface 26 extending parallel to the axis and the first outer surface A33 of the first sleeve 12; a connector member 16 having a third inner surface A34 engageable with the second outer surface 26 of the second end of the first sleeve 12; a second axial end of a second sleeve 14 having a second outer surface 26 extending parallel to the first outer surface A33 and the axis of the second sleeve 14; and, the connector member 16 having a fourth inner surface A34 engageable with the second outer surface 26 of the second end of the second sleeve 14 to effect attachment of the first sleeve

and the second sleeve (col. 1, lines 47-50). Therefore, as taught by Benoit et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the second axial end A9 of the first sleeve 16 with a second outer surface extending parallel to the axis and the first outer surface A30 of the first sleeve 16; to provide the connector member 12 with a third inner surface engageable with the second outer surface of the second end of the first sleeve 16; to provide the second axial end A9 of the second sleeve 16 with a second outer surface extending parallel to the first outer surface A30 and the axis of the second sleeve 16; and, to provide the connector member 12 with a fourth inner surface engageable with the second surface of the second end of the second sleeve 16 to effect attachment of the first sleeve and the sleeve to the connector member.

Regarding claim 20, Broszat et al., as modified, fail to disclose the connector member 12 crimped to the second axial end A9 of the first sleeve 16, and crimped to the second axial end A9 of the second sleeve 16. Benoit et al. teach, in Figures 1 and 2, a connecting member 16 crimped to a second end of a first sleeve 12 and to a second end of a second sleeve 14 to make a multi-piece tie rod (see Abstract).

Therefore, as taught by Benoit et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the welding sleeve of Broszat et al. with a pressing sleeve so that the connecting member 16 is crimped to a second end of the first sleeve and to the second end of the second sleeve to make a multi-piece tie rod.

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Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ernesto Garcia whose telephone number is 571-272-

7083. The examiner can normally be reached from 9:30-5:30. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Daniel P. Stodola can be reached at 571-272-7087.

Information regarding the status of an application may be obtained from the

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

E.G.

September 30, 2005

Attachments: one marked-up page of Broszat et al., 4,902,158 one marked-up page of Benoit et al., 3,837,755

DANIEL P. STODOLA SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 3600 Application/Control Number: 10/797,645

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Broszat et al., 4,902,158

